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TARANOV, A.T., dotsent

Prospects of the development of automotive transportation in the U.S.S.R. in 1959-1965. Trudy MIEI no.16:5-21 '61. (MIRA 14:12)
(Transportation, Automotive)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A.

Highway transport workers fulfilled their pledge. Za rul. 19 no.10:15-16 O '61. (MIRA 14:11)
(Transportation, Automotive)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A. T.

"Basic principles of rational organization of motor vehicle transport in the USSR"

report to be submitted for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas - Geneva, Switzerland, 4-20 Feb 63

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A. Ya.

"Absorption of Fast Electrons in Lithium,"Carbon, Aluminium, Copper, and Lead," Zhur. eksper. i teoret. fiz., 9, No.2, 1939

Ukr. Physico-Tech. Inst., Khar'kov

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A. Ya, and IVANOV, A. V.

"Investigation of the Radiational 'Bremsung' of Electrons by the Calorimetric Method. I," Zhur. eksper. i teoret. fiz., 11, No.1, 1941

Ukr. Physico-Tech. Inst., Khar'kov

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A.Ya.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1744
AUTHOR SOROKIN,P.V., TARANOV,A.Ya.
TITLE The Polarization of Protons Elastically Scattered by C^{12}-Nuclei.
PERIODICAL Dokl.Akad.Nauk, 111, fasc.1, 82-84 (1956)
Issued: 1 / 1957

I.T.DJATLOV and L.N.ROZENCVEJG (in connection with work carried out by the physical department of the physical-mathematical faculty of Charkov of the State University "A.M.GOR'KIJ", No 6, 81 (1955)) showed that scattered protons are partly polarized, and they computed curves for the dependence of polarization P on the energy of the protons at different scattering angles. The present report deals with the experimental examination of these results, and furthermore the correctness of the phase analysis by H.L.JACKSON and A.I.GALONSKIJ, Phys.Rev. 89, 370 (1953) is checked. The apparatus used for measuring the degree of polarization P is discussed on the basis of a drawing. The protons, which are accelerated by means of an electrostatic generator, pass through a system of collimator openings and then impinge upon a solid carbon target. The amperage of the primary bundle is measured by means of a FARADAY cylinder and a current integrator. The scattered protons then impinge on an analyzer filled with helium (40 cm mercury column).
The protons scattered by He^4 can then impinge on two proportionality counters. The rather powerful analyzer can indicate the polarization of proton bundles with the intensity of 10^4 proton/sec. The formula for azimuthal asymmetry is given. For the intensity ratio at $\varphi = 0^\circ$ and at $\varphi = 180^\circ$ it applies that

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Dokl.Akad.Nauk, 111, fasc. 1, 82-84 (1956) CARD 2 / 2 PA - 1744

$R = (1 - PP_{eff})/(1 + PP_{eff})$. Here P denotes the polarization of the protons which are elastically scattered by C^{12} nuclei, P_{eff} - effective value of the polarization of protons scattered in the helium analyzer, φ - the angle between the normals on the planes of the first and second scattering. For the elimination of asymmetry resulting from the difference in the degree of efficiency of the two detectors, the places of the counters were interchanged in the course of the test. The geometric mean value for the two positions of the counters was assumed as the amount of the asymmetry R. Because of the unfavorable geometric position of the analyzer the computation of P_{eff} would be tedious and complicated. For this reason P_{eff} was here determined from an experiment dealing with the twofold scattering of the protons by He^4. The value of P_{eff} found in this manner is represented in a diagram as a function of the energy with which the protons impinge upon the foil of the analyzer. This curve then served the purpose of determining the degree of polarization of the protons which were elastically scattered by C^{12} nuclei. The values thus obtained for polarization are shown in form of a diagram for the angle of 60° in the center of mass system. Agreement of experimental with theoretical data confirms the results of the phase analysis by H.L.JACKSON et al.

INSTITUTION: Physical-Technical Institute of the Academy of Science of the Ukrainian SSR.

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USSR/Nuclear Physics - Nuclear Reaction C-5

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 509

Author : Deyneko, A.S., Taranov, A.Ya., Val'ter, A.K.
Inst : -
Title : Measurement of the Effective Cross Sections of the Reactions C^{12} (p, γ) and C^{12} (d, n) in the Region of Small Energies of Bombarding Particles.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 32, No 2, 251-255

Abstract : An investigation is made of the reactions C^{12} (p, γ), N^{13} and C^{12} (d, n) N^{13} in the energy range of bombarding particles of 300 -- 400 kev. The β^+ activity of N^{13} was recorded with the aid of a vacuum tube electrometer. The resulting values of the yields of the reactions with thick targets in the investigated energy range are in good agreement with the course of the analogous curves at energies above 400 kev.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARAKOV, A. Ya.

with SOROKIN, P. V., and VAL'TER, A. K. . .
"Investigation of Polarization of Protons Elastic Scattered from C^{12},"
with GAVRILOVSKIY, B. V., KARAD'YEV, K. V., MAN'KO, V. I., SOROKIN, P. V., AND VAL'TER, A. K. . . . "Polarization of Protons Scattered by O^{16} Spin and Parity of the 3,11 Mev Level of the F^{17} Nucleus,"

with DEYNEKO, A. S. and VAL'TER, A. K., "Measurements of the Cross Sections of the B^{10} (p,γ) and B^{10} (d, n) Reactions,"

Physico-Tech. Inst. Acad. Sci. Ukr SSR

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

AUTHOR DEYNEKO A.S., TARANOV A.Ya., VAL'TER A.K. PA - 2668

TITLE Measurement of the $C^{12}(p,\gamma)$ and $C^{12}(d,n)$ Effective Cross Sections For Low Energy Bombarding Particles.
(Izmereniye effektivnykh poperechnykh secheniy reaktsiy $C^{12}(p,\gamma)$ i $C^{12}(d,n)$ v oblasti malykh energiy bombardiruyushchikh chastits. - Russian)

PERIODICAL Zhurnal Eksperim. i Teoret.Fiziki, 1957, Vol 32, Nr 2, pp 251-255 (USSR)
Received 5/1957 Reviewed 6/1957

ABSTRACT It is the object of the present work to determine the effective cross sections of the reactions $C^{12}+H^1 \rightarrow N^{13}+Q(\gamma)$ (1) and $C^{12}+H^2 \rightarrow N^{13}+n+Q$.(2). When studying the reaction (1) it was of interest to compare the experimentally obtained effective cross sections with those obtained by means of the extrapolation formula.
Apparatus: Protons and Deuterons were accelerated by means of the electrostatic generator of the Physical-Technical Institute of the Academy of Science of the Ukrainian SSR. Tests were carried out on atomic and molecular bundles of hydrogen and deuterium. Experiments discussed here are based upon the quantitative determination of the β-active product accumulated in the target of the reaction. Thick targets of natural carbon were used. The experimental order is discussed on the basis of a drawing.
Measuring of Cross Sections: For the yield of the reactions investigated here a formula is given. Two diagrams illustrate the curves of the yields of both reactions. Here the ordinate axis is plotted on the yield, i.e. the number of positrons per particle which impinge on the target. The abscissa axis characterized the energy of the impinging particles in keV.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

Measurement of the $C^{12}(p\gamma)$ and $C^{12}(d,n)$ Effective Cross Sections PA-2668
For Low Energy Bombarding Particles.

The cross section was determined from the curves of the yield and is represented by the well-known formula $\sigma=(dy/dE)(dE/dx)/n$. Here dE/dx denotes the loss of energy of the bombarded particle in the target, y - the yield of the reaction, n - the yield curve. The cross section of the reaction $C^{12}(p,\gamma)$ amounts to $0,3 \cdot 10^{-30}$ At 313 keV and at 358 keV increases to $6,4 \cdot 10^{-30}$ cm^2. The cross section of the reaction $C^{12}(d,n)$ amounts to $0,8 \cdot 10^{-28}$ cm^2 at 340 MeV.

ASSOCIATION Physical-Technical Institute of the Academy of Science of the Ukrainian SSR
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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

AUTHORS	Sorokin, P.V., Valter, A.K., Gavrilovskiy, B.V., Karadzhev, K.V., Man'ko, V.I., Taranov, A.Ya. 56-3-9/59
TITLE	Polarization of Protons Scattered by O^{16}. Spin and Parity of the 3,11 MeV Level in the F^{17} Nucleus (Polyarizatsiya protonov pri rasseyanii na O^{16}. Spin i chetnost' urovnya 3,11 MeV yadra F^{17} - Russian)
PERIODICAL	Zhurnal Eksperim.i Teoret.Fiziki,1957,Vol 33,Nr 3,pp 606-609(USSR)
ABSTRACT	The protons scattered elastically by O^{16} (initial energy from 2,6 to 2,8 MeV) were investigated with respect to their polarization. As a characteristic quantity P_{eff} to 0,80 $\pm$ 0,07 was found within the total energy domain. P_{eff} denotes the effective polarization value. Spin and parity were determined at 1/2 for the point of resonance of E_R = 2,66 MeV, which corresponds to an excited level of 3,11 MeV in an F^{17} -nucleus. There are 3 figures, 1 table and 1 Slavic reference.
ASSOCIATION	Physical-Technical Institute AN of the Ukrainian SSR (Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR).
SUBMITTED	February 26, 1957
AVAILABLE	Library of Congress.
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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

AUTHORS: Val'ter, A. K., Malakhov, I. Ya., Sorokin, SOV/48-22-7-22/26
P. V., Taranov, A. Ya.

TITLE: Elastic Scattering of Protons on Si^{28} Nuclei. Spin and Parity of the Levels of 4,31 and 4,73 MeV of the P^{29} Nucleus (Uprugoye rasseyaniye protonov yadrami Si^{28}. Spin i chetnost' urovney 4,31 i 4,73 MeV yadra P^{29})

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 7, pp. 871 - 876 (USSR)

ABSTRACT: The scattering cross-section of the reaction p - Si^{28} was measured in order to establish the characteristics of the excited states of the P^{29} nucleus. These states are connected with the resonance mentioned in reference 1. The method of measurement is described first. The proton beam was accelerated in the electrostatic generator of the Physical-Technical Institute of the AS Ukr SSSR. It is deflected by 90° by a magnetic analyzer. It then passes through a system of collimating diaphragms with a diameter of 2 mm and strikes a silicon target. From the qualitative analysis it is ascertained, that the level of 4,31 MeV can have a spin and a parity of $3/2^-$ or $1/2^-$. The

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determination of the spin and the parity for the level of $1/2^+$ with 4,73 MeV is beyond doubt. For a final determination of the spin of the 4,31 level the computed curves were compared with the experimental results. In order to compute the scattering cross-section of the reaction p - Si^{28} in the range from 1,6 to 2,2 MeV data from reference 5 were used. The cross-section was computed according to formulae (1), (2) and (3) without assuming a dependence of the phases on the energy. The maximum divergence between the experimental points and the computed curves did not exceed 25%. As a summary it is stated, that the resonance half-widths found experimentally, 50 and 14 keV, differ considerably from the values found in reference 1, 60 and 25 keV. The results of the phase analysis are exposed. The ratio of the given level-widths and the quantity

$\frac{3\hbar^2}{2ma}$ shows that the level of 4,31 MeV apparently is a single-stage level whereas the 4,73 MeV level is connected with a much more complicated mechanism of excitation. The evidence

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concerning the spins and parities of these levels substantiate the preliminary experimental results of proton polarization in an elastic scattering of p on Si^{28}. There are 9 figures, 1 table, and 5 references, 0 of which is Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physical and Technical Institute, AS Ukr SSR)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

21(0),24(5) SOV/56-35-6-10/44

AUTHORS: Taranov, A. Ya., Sorokin, P. V., Val'ter, A. K., Malakhov, I. Ya.

TITLE: The Polarization of Protons Elastically Scattered on Si^{28} Nuclei (Polyarizatsiya protonov, uprugo rasseyannykh yadrami Si^{28})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 6, pp 1386-1390 (USSR)

ABSTRACT: In the introduction, some papers dealing with p-Si^{28} scattering are discussed in short and some results are mentioned. (Ref 1: Scattering cross section at E_p = 1.65 and 2.09 Mev (resonance), with breadths of ~60 and ~25 kev, broad resonance also at 2.9 Mev; Ref 2 (Val'ter et al.): Measurements of elastic scattering cross sections at E_p = 1.5 to 3.1 Mev, results in table 1; Ref 3: Survey of spin and parity of the 4.31 Mev level, in agreement with the results of Ref 2). The next paragraph of this paper deals theoretically with the calculation of the polarization $\vec{P} = P(\theta,E)\vec{n}$, $\vec{n} = [\vec{k}\vec{k}'] / |[\vec{k}\vec{k}']|$, according to formulae given in references 4 and 5. In the following chapter the results obtained by polarization measurements are published. Apparatus and method are described by

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The Polarization of Protons Elastically Scattered on Si^{28} Nuclei

references 6 and 7. The experiments were carried out on the electrostatic generator of the FTI AN USSR (Physico-Technical Institute, AS UkrSSR). Results are given by table 2, viz. for the scattering angles θ (in the center of mass system) of 60 and 90° for the following E_p-values: 1.7, 1.75, 1.8, 1.85, 2.0, 2.05, 2.10, 2.15. The experimentally determined polarization values agree with calculated values (which are also given by this table) within the error limits. The functions $P(E_p)$ are given in form of diagrams in figure 1 (for $\theta = 60^{\circ}$) and in figure 2 (for $\theta = 90^{\circ}$); a second ordinate shows the corresponding cross sections $\sigma(E_p)$, which were obtained as the results of a phase shift analysis. Two fully analogous diagrams are shown by figures 3 and 4, viz. for $\theta = 125^{\circ}$ and 150° respectively. There follows a short discussion of results. There are 4 figures, 2 tables, and 7 references, 3 of which are Soviet.

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SOV/56-35-6-10/44

The Polarization of Protons Elastically Scattered on Si^{28} Nuclei

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physico-Technical Institute of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: July 5, 1958

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21.5300 SOV/58-59-7-14796

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, pp 32 - 33 (USSR)

AUTHORS: Sorokin, P.V., Val'ter, A.K., Taranov, A.Ya.

TITLE: Measurement of Proton Polarization by Means of a Helium Analyzer

PERIODICAL: Uch. zap. Khar'kovsk. un-t, 1958, Vol 98, Tr. Fiz. otd. fiz.-matem. fak., Vol 7, pp 119 - 135

ABSTRACT: The authors describe the development of an instrument for measuring the polarization of protons that have been elastically scattered by nuclei. The instrument consists of a scattering chamber and a helium analyzer. Owing to its large "aperture ratio", the instrument can be utilized to measure the polarization of low-intensity beams (10^4 protons/sec). Experiments in double proton-He^4 scattering, as well as measurements of the polarization of protons elastically scattered by C^{12} nuclei, have shown that the instrument permits the measurement of polarization degrees in excess of 3 to 5% for protons resulting from reactions with a cross section of 10^{-25} cm^2 . $sterad^{-1}$. The reactions in question occur in targets containing 10^{19} nuclei/cm^2 at a primary current of 1 μ amp.

The authors' résumé

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

SOV/58-59-9-19/98

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 9, p 55 (USSR)

AUTHORS: Deyneko, A.S., Taranov, A.Ya., Val'ter, A.K.

TITLE: The Determination of Absolute Cross Sections for $B^{10}(p,\gamma)$ and $B^{10}(d, n)$ Reactions

PERIODICAL: Uch. zap. Khar'kovsk. un-t, 1958, Vol 98, Tr. Fiz. otd. fiz.-matem. fak., Vol 7, pp 163 - 170

ABSTRACT: In order to obtain more precise information concerning the levels of the C^{11} nucleus, the authors, through the positron activity of C^{11} nuclei, studied the absolute effective cross section for a $B^{10}(p,\gamma)$ reaction in the 300 to 1,500 KeV proton energy range and for a $B^{10}(d, n)$ reaction in the 100 to 400 KeV deuteron energy range. A special end-window counter served as positron detector. The targets were bombarded with a proton beam from an electrostatic generator, and it proved possible to turn the target faces toward the counter immediately after irradiation. The measured value of the half-life of C^{11} was equal to 20.6 ± 0.1 min. The authors give the energy dependences of the cross sections for $B^{10}(p,\gamma)$ and $B^{10}(d, n)$ reactions. It can be seen from the excitation curve for

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

SOV/58-59-9-19798

The Determination of Absolute Cross Sections for B^{10}(p,) and B^{10}(d, n) Reactions

the B^{10}(p, γ) reaction that extensive resonance exists at E_p = 1.176 MeV. Other resonances were not observed in the investigated range. Accuracy in cross-section measurement amounts to 20% at energies of 300 to 600 KeV and attains 10% in the region of resonance. When E_d = 230 KeV, there is a maximum in the cross section for the B^{10} (d, n) reaction. The absolute value of the effective cross section at resonance amounts to $2.68 \cdot 10^{-28}$ cm^2 with an accuracy approaching $\pm$ 10%. On the basis of these data, the value of the resonance-level energy of C^{11} was computed to be 25.345 MeV.

V.I. Man'ko

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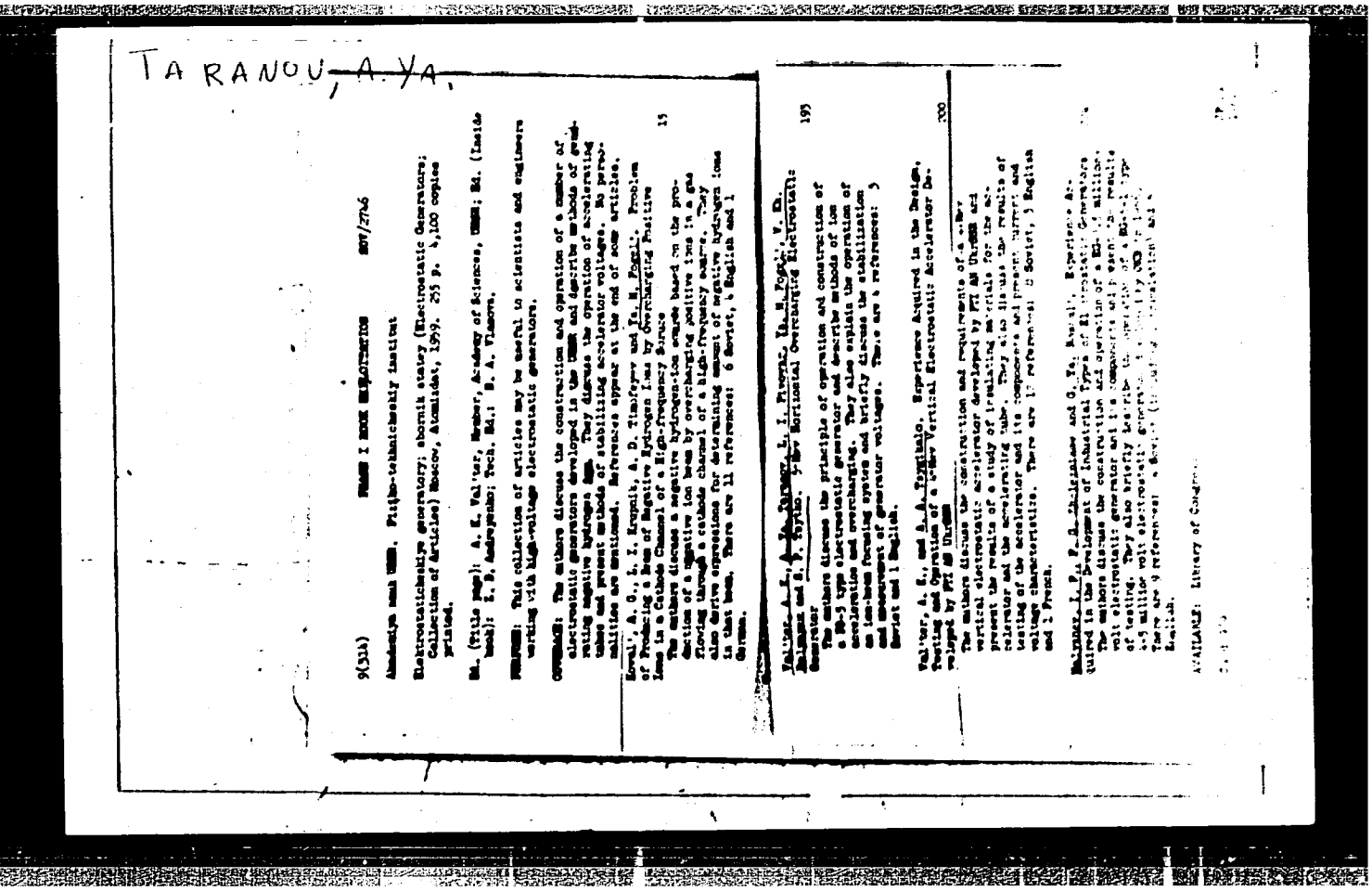

TARANOV, A.YA.

9(3)11) PHASE I BOOK EXPLOITATION SOV/2746

Akademiya nauk SSSR. Fiziko-tekhnicheskiy institut

Elektrostaticheskiye generatory; sbornik statey (Electrostatic Generators; Collection of Articles) Moscow, Atomizdat, 1959. 255 p. 4,100 copies printed.

Ed. (Title page): A. K. Val'ter, Member, Academy of Sciences, USSR; Ed. (Inside book): I. P. Andrianov; Tech. Ed.: B. A. Timofeyev.

PURPOSE: This collection of articles may be useful to scientists and engineers working with high-voltage electrostatic generators.

COVERAGE: The authors discuss the construction and operation of a number of electrostatic generators developed in the USSR and describe methods of producing negative hydrogen ions. They discuss the operation of accelerating tubes and present methods of stabilizing accelerator voltages. No personalities are mentioned. References appear at the end of some articles.

Koval', A. G., L. I. Krupnik, A. D. Timofeyev and Ya. M. Fogel'. Problem of Producing a Beam of Negative Hydrogen Ions by Overcharging Positive Ions in a Cesium Channel of a High-Frequency Source 15

The authors discuss a negative hydrogen-ion source based on the production of a negative ion beam by overcharging positive ions in a gas flowing through a cesium channel of a high-frequency source. They also derive equations for determining amount of negative hydrogen ions in that beam. There are 11 references: 6 Soviet, 4 English and 1 German.

Val'ter, A. K., A. D. Timofeyev, L. I. Pivnik, Ya. M. Fogel', V. G. Dolgikh, and G. V. Sidorov. Tube Horizontal Overcharging Electrostatic Generator 195

The authors discuss the principle of operation and construction of a TG-3 type electrostatic generator and describe methods of acceleration and overcharging. They also explain the operation of an ion-beam forming system and briefly discuss the stabilization and measurement of generator voltages. There are 4 references: 3 Soviet and 1 English.

Val'ter, A. K., and A. A. Tsyplakov. Experience Acquired in the Design, Testing and Operation of a Tube Vertical Electrostatic Accelerator Designed by FTI AN USSR 200

The authors discuss the construction and requirements of another vertical electrostatic accelerator developed by FTI AN USSR and present the results of a study of insulating materials for the accelerator and the accelerating tube. They also discuss the results of testing of the accelerator and its components and present current and voltage characteristics. There are 12 references: 8 Soviet, 3 English and 1 French.

Shimanov, I. P., P. A. Zhilinskiy and O. Ye. Kuvshinskiy. Experience Acquired in the Development of Industrial Types of Electrostatic Generators 215

The authors discuss the construction and operation of a [illegible] million volt electrostatic generator and its components and present the results of testing. They also briefly describe the [illegible] type of million volt electrostatic generator [illegible] There are 9 references: 4 Soviet, 4 English and 1 German.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A. Ya.

21 (7), 21 (8)
AUTHOR: Baskov, V. P.

TITLE: II All-Union Conference on Nuclear Spectroscopy
(II Vsesoyuznoye soveshchaniye po yadernoy spektroskopii)

PERIODICAL: Atomnaya energiya (Ya. 1959, Vol 7, Nr 1, pp 76-78 (USSR)

ABSTRACT: The II All-Union Conference was held from January 26 to February 2, 1959 at Kharkov. More than 300 participants heard 100 lectures, the most important of which dealt with the following fields. Nuclear Theory. General problems of theory. A. S. Davydov (MSU) Theoretical aspects of the so-called excited nuclear states. L. E. Fazer. Deformed nuclei. Nikolaev, L. K. Peker, L. A. Sliv (LGU). Calculation of the deformed nuclei. Ya. [illegible] oscillations of deformed nuclei. Ya. [illegible] S. P. Rybkin (LGU). Calculation of the fermion-fermion matrix element for β-transitions by means of the generalized nuclear model. A. T. Belyayev (IAE). Consideration of pair correlation in nuclei. [illegible] (IAE). The effective charge of the nucleus. [illegible] conductivity model to nuclei for the purpose of calculating their moments of inertia. E. Kh. Garutskiy (IAE). Problems of the nuclear stability of [illegible] present stage in the theory of β-decay. Ya. [illegible]

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Ya. [illegible] Measurement of the angular correlation between electron and neutrino in the decay of the neutron. [illegible] Measurement of the asymmetry between the transversal electron polarization and circular polarization of γ-quants occurring in the decay of $^{27}Co^{60}$ and $^{59}Co^{60}$. Deny Sessman. Irradiation of Nuclei. [illegible] Amirkhanov, A. I. Taliev, Ya. V. [illegible], Ya. [illegible] A. I. Ivov, P. M. Nikolaev, S. P. Shirokov, A. A. [illegible] Active Nuclides, Produced by Fast Neutrons (Aktivnyye nuklidy, obrazuyushchiyesya pod deystviyem bystrykh neytronov). Chair'evskiy Institut (Physico-technical Institute, Kharkov). The $^{31}P^{30}$, $^{19}F^{20}$ (p,p'), $^{32}S^{34}$ (p,n), $^{42}Ca^{43}$ (p,n) and $^{48}Ti^{49}$ (p,n) reactions. B. S. Dzhelepov, A. P. Komar, Ye. K. Lyubimov, N. Ch. Lebedev, V. V. Komashinskiy (Leningrad Physico-technical Institute). Investigation of the capture constant of the lower levels of some nuclei during their bombardment by multiply charged ions (C, O and Si). [illegible] Nuclear Isotopes. Yu. V. Grigor'yev, V. I. Zakharov (Kiev). Isotopes of Fe, Ni, Co, Cu, Zn, Ga, Ge, As, Se, Br, Kr, Rb, Sr, Y, Zr, Nb, Mo, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, Te, I, Xe, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Th, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr, Rf, Ha, Ku. Isotopes of Ne, Ar, Kr, Xe, Rn, Fr, Ra, Ac, Pa

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, A.Ya.

24(5),21(7)
AUTHOR:

SOV/48-23-12/31

Walter, A.K., Boyenko, A.K., Kalacher, I.Ya., Soroka, E.V., Taranov, A.Ya.

TITLE:

The Elastic Scattering and the Radiation Capture of Protons by B^{14}-Nuclei (Uprugoye rasseyaniye i radiatsionnyy zakhvat protonov yadrami B^{14})

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, pp 839-845 (USSR)

ABSTRACT:

It is pointed out in the introduction that the investigations of the elastic scattering of the protons by B^{14}-nuclei were carried out by studying the levels of the O^{15}-nuclei, and a number of papers (Ref 1-7) are pointed out in this connection. In another paper (Ref 8), the reaction $B^{14}(p,\gamma)$ was investigated, and the results of these papers are shown in diagrams (Fig 2 and 3). In the present paper, the elastic scattering cross section is investigated in the energy range of 1.7 - 3.5 Mev. The measuring instrument used in these investigations is shown in figure 1, and the proton beam was generated by the electrostatic generator

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the protons on B^{14}-nuclei was measured under the angles 34, 90, 141 and 154°, and the results are shown in diagrams (Fig 2-4). The curves $d(\sigma/\sigma_R)$ show all mirror resonance and one side resonance at 2.6 Mev. In order to determine the width of the levels, the value of the resonance energy was accurately determined. It was investigated how much the proton beam is monoenergetic, and the reaction $N^{14}(p,\gamma)$ was studied. An experimental width of resonance of 7.5 kev was measured. The relative γ-yield was investigated in the resonance range of 1.8, 2.35 and 2.68 Mev, and the results are shown in 2 diagrams (Fig 7 and 8). By comparing the widths of the resonance thus obtained with the corresponding values for the resonance in the elastic scattering cross section, it becomes clear that the energetic scattering of the protons does practically not depend on the energy, and that the latter amounts to about 20 kev. This determines the width of the levels in the elastic scattering cross section at 17 and 40 kev, respectively. The levels of

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the O^{15}-nuclei are compiled in table 2, and it is established that the results obtained are in good agreement with those obtained by other authors. The authors thank N. I. Ostr for the preparation of the B^{14}-target by the electromagnetic separator, and A. A. Tsyplenkin and Th. A. Durchenko and the staff for the operation of the electrostatic generator. There are 8 figures, 2 tables, and 10 references, 7 of which is Soviet.

ASSOCIATION:

Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Physico-technical Institute of the Academy of Sciences, USSR)

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24(5),21(7) SOV/48-23-7-13/31

AUTHORS: Val'ter, A. K., Malakhov, I. Ya., Sorokin, P. V., Taranov, A. Ya.

TITLE: Elastic Scattering of the Protons by Ar^{40}-Nuclei
(Uprogoye rasseyaniye protonov yadrami Ar^{40})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, pp 846-848 (USSR)

ABSTRACT: In the introduction, it is ascertained that the investigation of the elastic scattering of the protons by Ar^{40}-nuclei is carried out by studying the levels of the K^{41}-nuclei. A non-Russian paper is indicated (Ref 2) in which weak resonances were determined at the energies of 1.9 and 2.48 Mev; the values put forward are, however, considered inaccurate to obtain a survey of the spins and parities of the respective levels. The experiments described in the present paper were carried out with the same instrument as the experiments described in the previous paper of this issue. The elastic scattering cross section was recorded under the angles of 90, 125 and 150° in an energy range of 1.7 to 2.7 Mev. As the diagrams of

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figures 1, 2 and 3 show, two weak resonances can be observed in the elastic scattering cross section at E_p = 1.86 and 2.45 Mev, and further a number of resonances at energies over 2.5 Mev. A comparison of the experimental data with the data computed, as well as a determination of the widths of the levels, are not possible. It is further ascertained that the reaction $Ar^{40}(p,n)K^{40}$ is only realized by protons with the orbital momentum l = 3 or l = 5. Finally, the distance of the levels in the K^{41}-nuclei is evaluated, and is indicated with 20 kev at an excitation energy of 10 Mev. There are 3 figures and 6 references, 2 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR
(Physico-technical Institute of the Academy of Sciences, UkrSSR)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

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B019/B056

24.6600

AUTHORS: Val'ter, A. K., Deyneko, A. S., Sorokin, P. V., and Taranov, A. Ya.

TITLE: The Elastic Scattering of Protons by Ne^{20} Nuclei

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 7, pp. 884-886

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place from January 19 to January 27, 1960 at Moscow. As a target, gaseous neon (90.5% Ne^{20}) at a pressure of 5 torr was used in the measurements described. The cross section was measured at angles of 55, 90, 125, 141, and 151° in the center-of-mass system. The proton energy was varied in the range of from 1.6 - 3.4 Mev. The heterogeneity of the radiation was ±8 kev. From the results shown in Figs. 1 and 2, five well-marked resonances may be seen. In the first column of the Table, the proton energies, in the second column the energies of the corresponding Na^{21} levels, in the third the level widths according to data by Heaberli (Ref. 2) and according to data obtained by the authors are

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The Elastic Scattering of Protons by Ne^{20} Nuclei

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given. Furthermore, the spins and parities are given. The latter were obtained by a phase shift analysis. As shown by an investigation of the polarization of the protons scattered by Ne^{20} nuclei at an angle of 90°, the polarization in the energy range of from 1 - 1.8 Mev attains 70% (Fig. 3). There are 3 figures, 1 table, and 7 references: 3 Soviet, 3 US, and 1 Dutch.

Резонансные энергии протонов и характеристики уровней Na^{21}

E_p, MeV	Энергия уровня ядра Na^{21}, MeV	Ширина уровня Γ, keV		Спин и четность	$\frac{\Gamma_p}{\Gamma}$	Приведенная ширина γ^2, MeV см
		по нашим данным	по данным [2]			
1,81	4,18	121	180	$3/2^-$		$1,4 \cdot 10^{-13}$
1,96	4,32	17	6	$5/2^+$	0,25	$0,8 \cdot 10^{-13}$
2,15	4,50	27	17	$3/2^+$	0,84	$0,9 \cdot 10^{-13}$
2,69	5,02					
3,18	5,48	80	110	$1/2^+$		$0,2 \cdot 10^{-13}$

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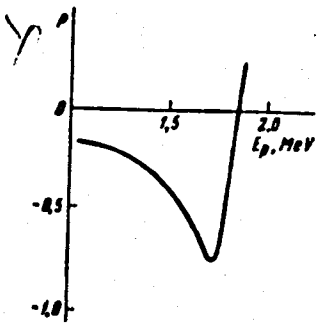

Рис. 3. Поляризация протонов, рассеянных ядрами Ne^{20} под углом 90°

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B019/B060

26.2260

AUTHORS: Deyneko, A. S., Popov, A. I., Sorokin, P. V., Taranov, A. Ya.

TITLE: A Magnetic Spectrometer with Double Focusing

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 7, pp. 924-928

TEXT: This is the reproduction of a lecture delivered at the 10th All-Union Conference on Nuclear Spectroscopy held in Moscow from January 19 to 27, 1960. The spectrometer described here, which has a magnetic field in sector form, is intended for the study of nuclear reactions brought about by electrostatic accelerators. Since the energy of the products resulting from the nuclear transformations examined with this spectrometer do not exceed 8 Mev, it was not necessary for the Hρ to exceed $4 \cdot 10^5$ oe·cm. A homogeneous field with 15,000 oe was easily attainable in the not very large gaps. The radius of curvature of the particle path was found to be 320 mm. The distance from the target to the magnetic field entrance is 400 mm, and it is therefore possible to study the distribution of the

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A Magnetic Spectrometer With Double Focusing S/048/60/024/007/010/011
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nuclear reaction products at an angle of 0 - 150°. The distance between the photographic state and the point of exit of the particles from the magnetic field is 700 mm. Fig. 2 shows a view of the spectrometer. The magnet core is made of Armco iron, while the water-cooled magnetizing coils are wound on copper bars. The resistance of the coils connected in series is 1.38 ohms, the maximum power consumption is 2.2 kw. The magnetizing current is stabilized to within an accuracy of 0.05%, and the magnetic field can be regulated between 2 and 15 koe. The proton energies which the spectrometer is capable of recording are in the range of 0.2 and 8 Mev. The spectrometer testing is dealt with in great detail. Fig. 3 shows the magnetic field strength as a function of the coil current. Thorough investigations revealed that the topography of the magnetic field does not change with rising magnetic field strength, and 0.3% is given as the maximum deviation of the field on the strength of the particle path. The maximum inhomogeneity is 0.03% per centimeter. Fig. 4 shows the resolving power as a function of the distance of the dector from the point of exit of the particle out of the magnetic field. The best resolution is at 686 mm, which is in good agreement with the projected distance of 700 mm. Fig. 5 shows line shapes of α-particles, as were determined with a scintillation counter

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A Magnetic Spectrometer With Double Focusing S/048/60/024/007/010/011
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and a photographic plate. The half-widths are 0.15 and 0.16%, respectively. It may be seen from these results that the spectrometer described here meets the demands made on it satisfactorily. There are 5 figures and 6 non-Soviet references.

ASSOCIATION: Khar'kovskiy fiziko-tekhnicheskiy institut Akademii nauk USSR
(Khar'kov Institute of Physics and Technology of the Academy of Sciences UkrSSR)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

S/120/61/000/006/039/041
E032/E514

AUTHORS: Andreyev, G.B., Deyneko, A.S., Malakhov, I.Ya., Sorokin, P.V. and Taranov, A.Ya.

TITLE: Production of thin Al_2O_3 films

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 149-150

TEXT: The aim of this work was to produce Al_2O_3 backing films having a thickness of less than 0.1 μ for targets evaporated onto them in vacuum. Such targets are suitable for scattering experiments in nuclear physics. The films are prepared as follows. A 40 μ aluminium foil is first etched in a 36% solution of NaOH in order to clean the surface from contamination. When a thickness of about 1 μ has been reached the foil is oxidised for 2 to 3 min in a bath containing an electrolyte which consists of 1.5% (by weight) of acetic acid and 1.5% of aluminium acetate. The cathodes in the electrolytic bath are two aluminium plates and the foil to be oxidised serves as the anode. The initial current density is varied between 1 and 100 mA and the final oxidation voltage between

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Production of thin Al_2O_3 films S/120/61/000/006/039/041
E032/E514

10 and 75 V. The oxidised foil is then cut into discs 15-20 mm in diameter and a drop of 30% NaOH solution is placed on one side of each of them. After a few minutes the reaction products are washed off with distilled water and the discs (mounted on stainless steel frames) are placed in a 25% solution of hydrochloric acid which dissolves the aluminium over the section from which Al_2O_3 has been removed. As a result a free transparent film of Al_2O_3 can be obtained. Films 0.015-0.1 μ can be produced in this way. Impurities do not exceed 0.5% relative to the aluminium. There are 1 figure and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc. The four latest English-language references read as follows: Ref.1: U. Hauser, W.Kerler, Rev.Scient.Instrum., 1958, 29, 380. Ref.2: K.Sevier, W.Parker, Nucl.Instrum. and Methods, 1960, 6, 218. Ref.3: G.Haas, J.Opt. Soc. America, 1949, 39, 532. Ref.5: J. R. Young, Phys.Rev., 1956, 103, 292.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR
(Physico-technical Institute AS UkrSSR)

SUBMITTED: March 29, 1961

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

SOROKIN, P.V.; POPOV, A.I.; STORIZHKO, V.Ye.; TARANOV, A.Ya.

Inelastic scattering of protons by Ne^{20} nuclei. Zhur. eksp. i teor. fiz. 40 no.5:1253-1256 My '61. (MIRA 14:7)

1. Fiziko-tekhnicheskiy institut AN Ukrainskoy SSR.
(Protons—Scattering)
(Neon—Isotopes)

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Elastic scattering of protons ...

energies of the compound nucleus Al^{27} between 9740 and 11,860 kev), 37 anomalies associated with Al^{27} levels have been found. The mean distance of these levels is 60 kev. The spins and parities of some levels were determined in a phase shift analysis of distinct resonances. There are 4 figures and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physicotechnical Institute of the Academy of Sciences UkrSSR)

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B104/B102

AUTHORS: Sorokin, P. V., Popov, A. I., Storizhko, V. Ye., and Taranov, A. Ya.

TITLE: Elastic scattering of protons from O^{18} nuclei

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 8, 1962, 1084-1088

TEXT: The differential cross section of 1.7-3.5 Mev protons scattered through angles of 90, 125, and 141° in the c.m.s. was measured. The O^{18} targets were obtained by a magnetic separator. The table gives the resonances found, the energies of the corresponding F^{19} levels, their spins and parities, and their widths. Spins and parities were determined from 13 distinct resonances by phase shift analysis. Within the limits of error the results are in good agreement with those found by others (R. R. Carlson et al., Phys. Rev., 122, 607 (1961); A. S. Deyneko et al., Izv. AN SSSR, Ser. fiz., 24, 924 (1960)). There are 3 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physico-technical Institute of the Academy of Sciences UkrSSR)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

S/056/62/043/003/008/063
B125/B102

AUTHORS: Sorokin, P. V., Popov, A. L., Storizhko, V. Ye., Taranov, A. Ya.

TITLE: Elastic and inelastic scattering of protons by Ne^{22} nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 749-751

TEXT: Cross sections were measured of elastic (proton energies 1.6-3.2 Mev) and inelastic (1.9-3.2 Mev) scattering, $Ne^{22}(p,p\gamma)$, through the angles 90, 125, and 141° in the center-of-mass system and the angular distribution of the 1.27-Mev γ-rays, using an apparatus described by A. K. Val'ter et al. (Izv. AN SSSR, seriya fiz., 23, 852, 1959) and P. V. Sorokin et al. (ZhETF, 40, 1253, 1961). The neon gas target was enriched to 87% with Ne^{22}. The results of these measurements were evaluated by the method of least squares under the following conditions: The resonance investigated is related to a single level. Only the least possible orbital moments l and l' take part in the reaction. The Ne^{22} ground state has spin and parity 0^+, the first excited state 2^+. The

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Elastic and inelastic scattering ... S/056/62/043/003/002/003
B125/B102

γ-transition between 2^+ and 0^+ is a pure E-transition. In this case, the angular distribution of the inelastically scattered protons can be represented as $1+a_2\cos^2\theta$. The relative intensities of γ-transitions determined from the relative intensities of the peaks in the spectrum of the γ-rays range from 0.12 to 2.66 and the measured widths of these transitions from 15 to 33 kev. The reduced widths γ_γ^2 calculated from the resonance integral are between 2.5 and 225 kev $= 0.1 \pm \Gamma_\gamma \Gamma_{p'}/[illegible]$ kev. As the proton energy E_{lab} increases from 1.914 to 3.16 Mev the excitation energy of the Na^{23} level increases monotonically from 10.626 to 11.818 Mev. There are 1 figure and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: January 24, 1962

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

[illegible]SOV, O. I.; ZINCHENKO, I. S.; KARNAUKHOV, I. M.; SLABOSPITSKIY, R. P.; TARASOV, A. Ya.

"A Source of Polarized Deuterons."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

KhFTI (Ukrainian Physico Technical Inst)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

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L 46961-66 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AP6029802 SOURCE CODE: UR/0089/66/021/002/0131/0132

AUTHOR: Slabospitskiy, R. P.; Karnaukhov, I. M.; Kiselev, I. Ye.; Taranov, A. Ya.

ORG: none

TITLE: Source of polarized ions with 1.2 μamp current

SOURCE: Atomnaya energiya, v. 21, no. 2, 1966, 131-132

TOPIC TAGS: electric polarization, hydrogen ion, deuterium, ion beam, ion current, charge exchange, ION SOURCE

ABSTRACT: The described positive polarized deuterium-ion source is similar to an earlier source developed by the authors (Program and Abstracts of Papers of XVI Annual Conference on Nuclear Spectroscopy and Atomic Structure (Moscow, 1966), M., Nauka, 1966, p. 128) but employs a more efficient ionizer, and a higher vacuum is produced through the use of stainless steel and mercury and titanium pumps. The source is based on the principle of spin-sorting the atoms in an inhomogeneous magnetic field with subsequent adiabatic extraction to a weak field region (Fig. 1). Deuterium (or hydrogen) molecules are dissociated in an hf discharge at 150 Mcs. A magnetic field (20 kOe) focuses the atoms with electron spin projections antiparallel to the field, and defocuses the atoms with parallel spins. The focused atomic beam had an intensity 6 x 10^{15} atoms/sec in a 5 mm diameter, and was ionized by a coaxi-

UDC: 539.103: 539.121.85: 539.128.2

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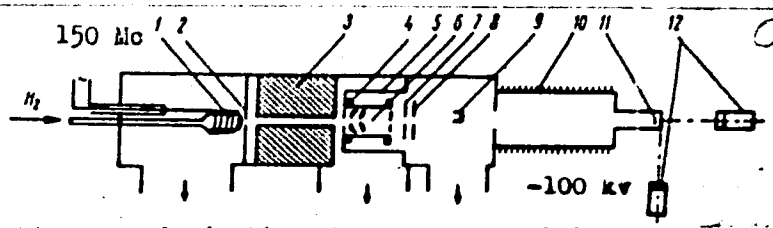
ACC NR: AP6029802

Fig. 1. Diagram of source



ally moving electron beam. The tensor polarization at a current of 1.2 microampere was found to be -0.274 ± 0.012. Orig. art. has: 1 figure [02]

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L 44774-66 EWT(1) AT

ACC NR: AP6031272 SOURCE CODE: UR/0057/66/036/009/1681/1684

AUTHOR: Yekhichev, O. I.; Zinchenko, G. N.; Zinchenko, N. S.; Karnaukhov, I. M.; Slabospitskiy, R. P.; Taranov, A. Ya.

ORG: none

TITLE: An atomic beam ionizer as a source of polarized ions

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 9, 1966, 1681-1684

TOPIC TAGS: ionizer, polarized ions, polarized ion source, atomic beam ionizer, electron beam, ionization

ABSTRACT: An ionizer based on the principle of ion focusing as developed and patented earlier by Zinchenko and others, is described in some detail. In this arrangement, the electron beam is coaxial with, instead of perpendicular to, the beam of polarized atoms, thus increasing the ionization length. The electron beam was produced by an electron gun with an oxide cathode 5.5 and 9.6 mm in inner and outer diameter, respectively. The distance from the cathode to the anode was about 7 mm, and from the anode to the collector, 60 mm. The hole diameters in the cathode, anode, and collector were 6, 7, and 8 mm, respectively. An investigation of the characteristics of the device revealed that the transmission factor of the electrons was 100 percent through the anode orifice, and 92 percent through the entire ionizer. The divergence of the electron beam was small, the beam diameter varying between 6 and 8 mm. A hydrogen atom beam produced by the dissociation of molecules in glow-discharge and

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L 44734-66
ACC NR: AP6031272

focused according to atomic spins in a field of a magnetic quadrupole was introduced into the ionizer. The measured efficiency of ionization was found to be 4.5×10^{-4} at a 90-mamp electron current and a 1400-v potential difference between the cathode and anode. The mass-spectrometric data on the composition of the focused atomic beam showed that it consists of hydrogen atoms, thus confirming the stated efficiency of ionization. This efficiency is 3 to 5 times higher than the results reported in the Proceedings of the International Symposium on Polarization Phenomena of Nucleons (Birkhaser Verlag. Basel und Stuttgart, 1961). Orig. art. has: 3 figures and 1 formula. [FP]

SUB CODE: 20/ SUBM DATE: 10Dec65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 5080

Card 2/2 UCR

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

ACC NR: AP7001727 SOURCE CODE: UR/0048/66/030/012/2031/2036

AUTHOR: Slabospitskiy,R.P.; Karnaukhov,I.M.; Yekhichev,O.I.; Taranov,A.Ya.

ORG: Physicotechnical Institute, Academy of Sciences of the UkrSSR (Fiziko-tekhnicheskiy institut Akademii nauk UkrSSR)

TITLE: A source of polarized ions [Report, Sixteenth annual Conference on Nuclear Spectroscopy and Nuclear Structure held at Moscow, 16 Jan. - 3 Feb. 1966]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 12, 1966, 2031-2036

TOPIC TAGS: ion source, hydrogen ion, deuterium, ion beam, proton polarization, deuteron polarization;polarized ion beam

ABSTRACT: The authors describe a source of polarized ions capable of producing a 0.3 μA beam of polarized deuterons with a polarization tensor component P_{33} of - 0.274. The source can also be employed to produce a beam of polarized protons. In this source the electron spin components in a beam of deuterium atoms are separated in an inhomogeneous magnetic field and the resulting beam of atoms with aligned electron spins is ionized by electron impact. Owing to the coupling between the electron and nuclear spins in the atom, there results a partially polarized beam of deuterons. In the described device deuterium molecules were admitted through a palladium filter to a Pyrex vessel coated on the inside with $(CH_3)_2SiCl_2$ where they were dissociated by the 150 MHz field produced by a 1.5 kW oscillator. The deuterium atoms issued from the dissociation vessel through a microcollimator of glass capillaries and traversed

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ACC NR: AP7001727

the field of a magnetic quadrupole which focused the component of the beam having the electron spins parallel to the direction of motion and defocused the component having antiparallel electron spins. The polarized atomic beam then traversed the ionizer where the atoms were ionized by impact of electrons moving in the same direction as the atomic beam. The polarized deuteron beam was subsequently accelerated to the desired energy. The ionizer was shielded from fringe fields by a soft steel jacket, and a uniform axial magnetic field was produced within it by a pair of Helmholtz coils. The thermionic cathode and the electron accelerator, focusing, and collector electrodes of the ionizer had central openings for passage of the atomic beam. For a more detailed description of an improved version of this ionizer see abstract AP 7001307. The polarization of the deuteron beam was determined by measuring the angular distribution of neutrons from the $T(d,n)He^4$ reaction at the 107 keV $3/2^+$ resonance. The authors thank A.P.Klyucharev for assistance and support, and B.P.Ad"yasevich for providing the microcollimators. Orig. art. has: 6 formulas and 7 figures.

SUB CODE: 20 SUBM DATE: None ORIG.REF: 007 OTH REF: 004

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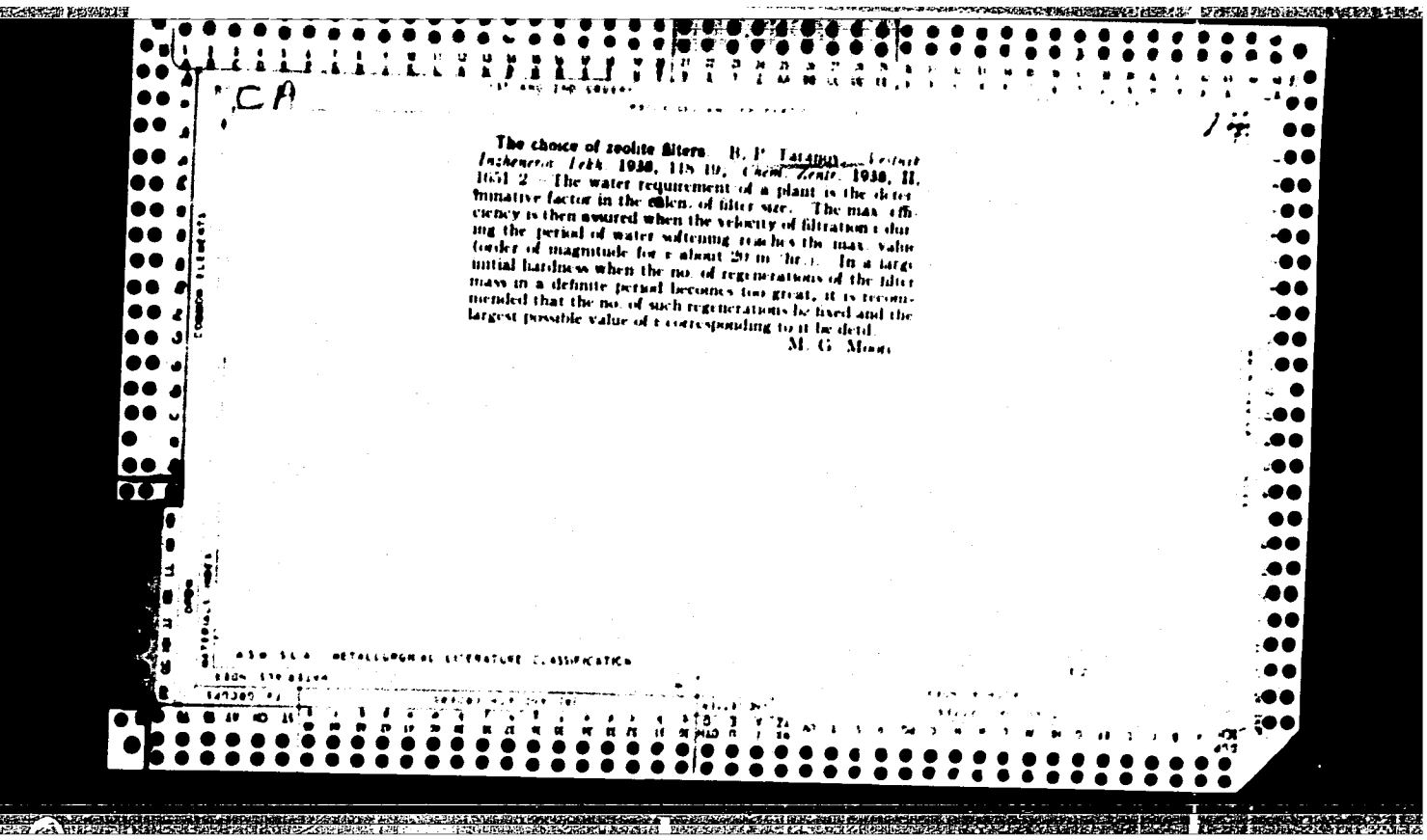
CA



The choice of zeolite filters. B. P. Taranov. *Vestnik Inzhenerov Tekh.* 1938, 118-19; *Chem. Zentr.* 1938, II, 1651-2.—The water requirement of a plant is the determinative factor in the calcn. of filter size. The max. efficiency is then assured when the velocity of filtration v during the period of water softening reaches the max. value (order of magnitude for v about 20 m/hr.). In a large initial hardness when the no. of regenerations of the filter mass in a definite period becomes too great, it is recommended that the no. of such regenerations be fixed and the largest possible value of v corresponding to it be detd.

M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B. P.

35273. Termodinamicheskie tsikly teplofidatsionnykh ustanovok. V SB: 50 let knevsk. Politekhn. In-ta . Kiev, 1948, S. 387-404 Bibliogr: 7 Nazv.

SO: Letopis' Zhurnal'nykh Statey. Vol. 34, 1949 Moskva

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B. P.

Taranov, B. P. "Methodology on the investigation of the vane design of the Curtiss stage-turbine," Izvestiya Kiyevsk. politekhn. in-ta, Vol VIII, 1948 (on cover: 1949), p. 69-81

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B. P.

26343 O pokazatelyakh regenerativnogo tsikla. Trudy in-ta. Teploznergetiki. (Akad. nauk ukr. SSR), sb. 1, 1949, s. 125-27

SO: LETOPIS' NO. 35, 1949

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TARANOV, B.P., dotsent

Diagram of regimes of heat supply systems. Trudy Inst.tepl. AN URSR no.7:76-82 '52. (MIRA 13:5)
(Heat engineering)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARNOV, B. P.

USSR/Thermodynamics - Thermochemistry. Equilibria. B-8
Physical-Chemical Analysis. Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18442

Author : B.P. Tarnov.
Inst : Kiev Polytechnical Institute.
Title : Mutual Connection Between Saturation Pressure and Enthalpy of Water near Boiling Point.

Orig Pub : Izv. Kiyvevsk. politekh. in-ta, 1956, 17, 109-111

Abstract : An empirical formula connecting the enthalpy i'_s of the saturated water steam with its pressure $p_s = (i_s / 98.4)3^{.5}$ is proposed. This formula guarantees a sufficient exactitude near the boiling point, in the zone of excess pressure, and in the zone of rarefication (the error at 0.305 to 3.68 abs. atm. is $\leq 5\%$, between 0.355 and 2.97 abs. atm. it is $\leq 3\%$).

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B.P., Cand Tech Sci--(diss) "[illegible] the effective [illegible] thermification system of the heating type and the heating selections of steam turbines." Kiev, 1957. 31 pp (Kiev Order of Lenin Polytech Inst), 1[illegible] copies. Bibliography at end of text ([illegible]) (KL,22-58, 110)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B.F., kandidat tekhnicheskikh nauk.

On relative effectiveness of stage heating of circuit water.
Teploenergetika 4 no.9:54-58 S '57. (MLRA 10:3)

1. Kiyevskiy politekhnicheskiy institut.
(Hot-water heating)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

SOV/143-59-1-7/17

8(6)

AUTHOR: Taranov, B.P., Doctor of Technical Sciences

TITLE: On Interrelation between the Pressures before and after the Steam Turbine Compartment and the Weight Flow of Steam through the Compartment (O vzaimosvyazi mezhdu davleniyami do i posle paroturbinnogo otseka i raskhodom para cherez otsek)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 1, pp 41-47 (USSR)

ABSTRACT: A steam turbine compartment is, in this article, a group of turbine stages connected in series. The calculation for variable operating conditions deals with the weight flow of steam (D, t/hr), pressure before the compartment (p_1, atm absolute pressure) and pressure after the compartment (p_2, atm absolute pressure) in order to determine one of these values when the other two are specified. The Flügel (Stodola) formulae

$$\frac{D}{D_o} = \frac{P_1}{P_{01}}\sqrt{\frac{T_{01}}{T_1}}, \qquad \frac{D}{D_o} = \sqrt{\frac{P_1^2 - P_2^2}{P_{01}^2 - P_{02}^2}}\sqrt{\frac{T_{01}}{T_1}}$$

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

On Interrelation between the Pressures before and after the Steam Turbine Compartment and the Weight Flow of Steam through the Compartment

apply, respectively, to supercritical and subcritical conditions and cover only multistage compartments with no less than four stages. A general expression, applying to multistage compartments as well as to compartments with few stages in both supercritical and subcritical conditions, was found by A.V.Shcheglyayev, who also offered its graphic interpretation: the surface of an oblique conoid with an adjoining flat triangle of supercritical conditions. Because of its complexity, A.V. Shcheglyayev's formula was little used. In 1954, the author modified it to make its application more convenient; but it still remained rather heavy. It has been established that the law of variable operating conditions of the steam turbine compartment can be expressed by the formula

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$$\frac{D\sqrt{P_1 V_1}}{P_1 \Phi(\beta)} = \text{const},$$

where $\beta = P_2/P_1$ and $\Phi(\beta)$ = interrelation between the

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

On Interrelation between the Pressures before and after the Steam Turbine Compartment and the Weight Flow of Steam through the Compartment

weight flow of steam through the compartment and the pressure ratio, which is elliptic in character. By selecting a proper scale, the elliptic function can be reduced to an arc of a circle, which permits to express the value $\Phi(\beta)$ by a trigonometric function. As a result, the following formula is offered for calculations:

$$\frac{D}{D_{01}} = \frac{p_1 \sin\varphi}{p_{01} \sin\varphi_0} \sqrt{\frac{p_{01} v_{01}}{p_1 v_1}}$$

The specific volume of steam, which constitutes a value necessary for the calculation of a turbine stage or compartment, can be easily determined by the use of an "is" diagram with pv = const lines. There are 2 diagrams and 8 Soviet references.

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SOV/143-59-1-7/17

On Interrelation between the Pressures before and after the Steam Turbine Compartment and the Weight Flow of Steam through the Compartment

ASSOCIATION: Kiyevskiy ordena Lenina politekhnicheskiy institut (Kiyev, Order of Lenin, Polytechnical Institute)

PRESENTED: By the Kafedra teploenergeticheskikh ustanovok elektrostantsiy (Chair of Thermopower Installations at Power Plants)

SUBMITTED: November 24, 1958

Card 4/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B.P., doktor tekhn.nauk

Constant pv product curves in the is-diagram of water vapor.
Teploenergetika 7 no. 12:87-89 D '60. (MIRA 14:1)
(Steam--Tables, calculations, etc.)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B.P., doktor tekhn.nauk

Power engineering considerations and prospects of using electric power for heating purposes. Energ.i elektrotekh. prom. no.4:42 O-D '62. (MIRA 16:2)

1. Kiyevskiy politekhnicheskiy institut.
(Electric power) (Electric heating)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, B.P., doktor tekhn.nauk; NEDUZHKO, Ye.A., inzh.

Calculational and operational central heating coefficients for municipal heat and electric power plants. Elek. sta. 35 no. 4:29-31 Ap '64. (MIRA 17:7)

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KOLESNIKOV, Ye.F., inzh.; TARANOV, D.I., inzh.

Roller feeder of the working componert of a rotary bucket excavator. Stroi. i dor. mash. 8 no.1:13-15 Ja '63.

(MIRA 18:5)

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TARANOV, D.I.

The ERG-350/1000 rotor-type excavator. Biul.tekh.-ekron.inform. no.9:4-6 '60. (MIRA 13:10)

(Excavating machinery)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

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KOLESNIKOV, Ye.F., inzh.; TARANOV, D.I., inzh.

Performance of rotary-bucket excavators with vertical and horizontal chips. Nauch. trudy Mosk. inst. radioelek. i gor. elektromekh. no.46:133-140 '62. (MIRA 17:1)

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KOLESNIKOV, Ye.F., inzh.; TARANOV, D.I., inzh.; KHARIK, B.D., inzh.

Efficient parameters of the buckets of a wheel excavator. Stroi. i dor. mash. 8 no.5:16-18 My '63. (MIRA 16:5)
(Excavating machinery)

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TARANOV, D.M.

36881. Drupoznaya prnvmoniya po mateialam Izhevskoy gotodskoy prozektury. Trudy Med. in-ta (Izhev. gos.med. in-t), t. IX, 1949, x x. 92-95

SO: Letopis' Zhurnal Nykh State, Vol. 50, Moskva, 1949

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, D.M., dotsent

Changes in the elasticity (resilience) of pulmonary tissue in inflammation. Trudy Izhev.gos.med.inst. 13:511-515 '51. (MIRA 13:2)

1. Zaveduyushchiy kafedroy patologicheskoy anatomii Izhevskogo meditsinskogo instituta.

(LUNGS--DISEASES)

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TARANOV, F.A.; SHCHERBAKOV, V.I.

Yu.G.Balenko, an outstanding electromechanical technician. Avtom., telem. i svias' 9 no.9:30 S '65. (MIRA 18:9)

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NEKRASOV, Z.I., dotsent; TOMKONOG, G.V., inzhener; YAKOVLEV, A.P.; TARANOV, F.S.

Improving the construction of blast furnaces. Stal' 7 no.2:106-109 '47. (MLRA 9:1)

1.Dneprepetrovskiy metallurgicheskiy institut.
(Blast furnaces)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, G. F.

"The swarming instinct in the family of the honey-bee." (p. 755) by G. F. Taranov

SO: Progress of Contemporary Biology Vol. 26, No. 2 (5) Sept.-Oct. 1947

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

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TARAN V, G. F.

Mbr., Inst. Apiculture, Bukovo, Moscow Oblast, -c1948-. "On the Productivity of Family of Honey Bees in Connection with the Effect of Swarming," Zool. Zhur. [illegible], No. 3, 1948.

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TARANOV, G.

How to increase the number of bees and beehives and raise honey production. Tr. from the Russian", p 95 (KOOPERATIVNO ZEMEDELIE, Vol 6 #3, Mar. 1951, Bulgaria)

SO: Monthly List of East European Accessions, Vol 2 #8 Library of Congress, August 1953, Uncl.

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TARANOV, G.

Bee Culture.

At a collective farm apiary. Sov. zhen., no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1953, Uncl.

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TARANOV, Z.F.

Bee Culture

Wider introduction of two-body hives for bee colonies. Pchelovodstvo, 27, No. 7, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, October 1952. Unclassified.

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TARANOV, G. F.

Bee Culture

Strong colonies are the basis for highly productive be culture. Pchelovodstvo 29 No. 10, 1952.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, G.F.

Bees

Certain regularities in production flights of bees. Zool.zhur. 31, no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, MARCH 1952 ~~1953~~, Uncl.

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Vyrashchivaniye i ispol(zovaiye sil'nykh chelinykh semey (The culture and exploitation of strong bee colonies) Moskva, Sel'khozgiz, 1953.

126 p. illus., diagrs., tables.

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TARANOV, G F.

YESAULOV, P.A., kandidat sel'skokhozyaystvennykh nauk; ALIKAYEV, V.A., kandidat veterinarnykh nauk; GRUDEV, D.I., kandidat sel'skokhozyaystvennykh nauk; DOROKHOV, S.M.; TARANOV, G.F., kandidat sel'skokhozyaystvennykh nauk; FANDEYEV, B.V., kandidat sel'skokhozyaystvennykh nauk; SHAIN, S.S., professor; PETROVSKAYA, A.P., redaktor; TATAPOV, M.I., tekhnicheskiy redaktor

[Fundamentals of stockbreeding; a textbook for students in secondary rural schools] Osnovy zhivotnovodstva; uchebnoe posobie dlia uchashchikhsia sel'skoi srednei shkoly. Pod red. P.A.Esaulova. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenila RSFSR, 1956. 294 p. (MLRA 10:1)

1. Starshiy spetsialist Ministerstva sel'skogo khozyaystva SSSR (for Dorokhov)

(Stock and stockbreeding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

USSR/Farm Animals. Honey Bee.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92660.

Author : Taranov, G.F.
Inst : Scientific Research Institute for Apiculture.
Title : Study of Cross Breeds Obtained through the Hybridization of High-Maintenance Georgian Bees with the Local Central Russian Bees.

Orig Pub: Dyull nauchno-tekhn. i. form. N.-i. in-ta pchelovodstva, 1957, No 2, 3-7.

Abstract: It has been concluded on the basis of tests made at 13 apiaries in 7 oblasts with 722 colonies, one half of which were cross breeds, together with observations made at 80 apiaries containing 1274 families that the cross breeds collect an average of 30% more honey than the colonies of local bees. The cross-

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Card : 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R00175491

Country : USSR
CATEGORY : Farm Animals. Honeybee Q

ABS. JOUR. : RZBiol., No. 13 1958, No. 59644

AUTHOR : Taranov, G.F.
INST. :
TITLE : Achievements of Soviet Science in the Breeding and Management of Honeybees

ORIG. PUB. : Pchelovodstvo, 1957, No.11, 24-28

ABSTRACT : No abstract.

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

COUNTRY : USSR
CATEGORY : Farm Animals. Honeybee Q

ABS. JOUR. : RZBiol., No. 13 1958, No. 59645

AUTHOR : Taranov, G.F. [?]
INST. : -
TITLE : Further Notes on the Causes of Self-Supersedure of Queens in Artificially Established Strong Harvesting Colonies
ORIG. PUB. : Pchelovodstvo, 1957, No.12, 25-28

ABSTRACT : From practical observations by many apiculturists who wrote to the editor, a conclusion is drawn that Butler's theory on the significance of the royal jelly cannot explain all the facts in honeybee life which pertain to the formation of the queen cells and the change of queens. In the relations between the queen and honeybees, apart from royal jelly, the queen's odor, her physiological condition and the character of egg laying also play a role.

CARD: 1/1

Q - 79

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, Georgiy Filippovich; PETROVSKAYA, L.P., red.; DZHATIYEVA, F.Kh., tekhn.red.

[For the young beekeeper; a manual for students in secondary schools] IUnomu pchelovodu; posobie dlia uchashchikhsia sredniei shkoly. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1958. 159 p. (MIRA 13:6)
(Bee culture)

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KOVALEV, A.M.; NUZHDIN, A.S.; POLTEV, V.I.; TARANOV, G.F.; TEMNOV, V.A.; MECHAYEVA, Ye.G., red.; PEVZNER, V.I., tekhn.red.

[Textbook on beekeeping] Uchebnik pchelovoda. Izd.2., perer. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 635 p. (MIRA 13:1)

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SHCHERBINA, Pavel Semenovich; PETROVSKAYA, L.P., red.; TARANOV, G.F., red.; SHCHEPTEVA, T.A., tekhn.red.

[In the world of bees; textbook for students] V mire pchel; posobie dlia uchashchikhsia. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv.RSFSR, 1960. 127 p. (MIRA 13:8)
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TARANOV, Georgiy Filippovich; KADIYEVA, Ye.V., red.; PROKOF'YEVA, L.N., tekhn.red.

[Biology of a bee colony] Biologiia pchelinoi sem'i. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1961. 335 p. (MIRA 14:4)
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Gas exchange in the ball of wintering bees (Apis mellifera). Zool. zhur. 40 no.10:1485-1494 O '61. (MIRA 14:9)

1. Research Institute of Apiculture, Rybnoye, Ryazan Region.
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TARANOV, G.F., kand. biol. nauk

[Physiology of the honey bee; feeding habits and digestion of bees. A manual for correspondence courses for experts in bee culture] Fiziologiia medonosnoi pchely; pitanie i pishchevarenie pchely. Uchebnoe posobie dlia zaochnoi podgotovki spetsialistov po pchelovodstvu vysshei kvalifikatsii. Rybnoe, In-t usovershenstvovaniia zootekhnikov-pchelovodov, 1962. 44 p. (MIRA 17:4)

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TARABOV, G.F., kand.biol.nauk; ZAYTSEV, G.P., doktor med. nauk; FOMYADIN, V.T., doktor med. nauk; MERTSULENKO, V.A., kand. med. nauk; NEVEROVA, N.V.; VINOGRADOVA, T.V., doktor bil. nauk; KOSTOGLODOV, V.F.; KIVALKINA, V.N., kand. biol. nauk; SOKOLOVA, G.S., red.; SAYTANIDI, L.D., tekhn. red.

[The bee and human health]Pchela i zdorov'e cheloveka. Moskva, Izd-vo M-va sel'khoz. RSFSR, 1962. 190 p. (MIRA 15:10)

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TARANOV, G.F., kand. biol. nauk

[Anatomy and physiology of bees. Reproduction of bees; a manual for correspondence course students specializing in apiculture] Anatomiia i fiziologiia pchely. Razmnozhenie pchel; uchebnoe posobie dlia zaochnoi podgotovki spetsialistov po pchelovodstvu vysshei kvalifikatsii. Rybnoe, In-t usovershenstvovaniia zootekhnikov-pchelovodov, 1964. 60 p. (MIRA 17:9)

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TARANOV, G. R. i ZHOFNTI, S. K.

25889

Ekspeditsiav Gruziyu. (izuchenie pchel vysokogornykh rayonov) Pchelovodstvo 1949, No. 8. s. 25-35

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

L 30361-66 EWP(1)/EWT(d) IJP(c) BB/GG/GD

ACC NR: AT6008312 SOURCE CODE: UR/0000/65/000/000/0020/0025

AUTHOR: Taranov, G. V. (L'vov)

ORG: none

TITLE: A possible circuit for a binary to decimal code converter

SOURCE: AN UkrSSR. Elementy sistem otbora i peredachi informatsii (Elements of systems for selecting and transferring information). Kiev, Naukova dumka, 1965, 20-25

TOPIC TAGS: binary code, code converter, computer component, semiconductor device

ABSTRACT: The author describes a simple converter for the transformation of consecutive binary codes into decimal codes. The unit, developed at the L'vov Polytechnic Institute (L'vovskiy politekhnicheskiy institut), for the multichannel code-pulse system of remote measurements is built from semiconductor elements and is based on the representation of the binary code by series of pulses denoting decimal digits. The main component of the converter is a pulse multiplier made of series stages operating under switching conditions, supplemented by triggering inputs sensitive to the number of binary discharges and by an "OR" element collecting the stage outputs. Orig. art. has: 2 formulas and 3 figures.

SUB CODE: 09/ SUBM DATE: 6Nov65/ ORIG REF: 005

Card 1/1

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

L 39068-66 EWT(d)/FSS-2/EEC(k)-2 (s) SOURCE CODE: UR/0000/65/000/000/0134/0143

ACC NR: AT6021050

AUTHOR: Shvetskiy, B. I. (L'vov); Kirianaki, N. V. (L'vov); Taranov, G. V. (L'vov)

ORG: none

TITLE: A multichannel pulse-code telemetry system for data units with a frequency-unified parameter

SOURCE: AN UkrSSR. Metody otbora i peredachi informatsii (Methods of selecting and transferring information). Kiev, Naukova dumka, 1965, 134-143

TOPIC TAGS: telemetry system, telemetry transmitter, telemetry receiver, pulse coding, pulse code modulation

ABSTRACT: A telemetry system for the simultaneous measurement of a number of data values is described. The frequencies are pulse-binary coded and transmitted along communication lines. The system consists of a transmitter and receiver. The transmitter links the outputs of the data units, quantizes and codes the frequencies in binary form, transforms the parallel binary code into a sequential code for transmission along a single line, shapes the code pulses, and rounds off the number of code pulses to an even value to prevent distortion. The receiver transforms the sequential binary code into a parallel code and makes a parity check. The receiver also indicates the number of the data unit along the sequence with the measured value and stores the data be-

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ACC NR: AT6021050

tween reception intervals. The main advantages of using frequency as a unified parameter are: greater precision of measurement, easier change of scale, elimination of distortion during communication, and ease of translation into any other code. Detailed schematic diagrams of both the transmitting and receiving systems are presented and an explanation of the operation of various parts is given. The error of the system, excluding errors introduced by the data units, may be reduced to 0.2%. Orig. art. has: 3 figures.

SUB CODE: 09/ SUBM DATE: 20Nov65/ ORIG REF: 005

Card 2/2 MLP

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

L 06201-67 EWT(d)/EEC(k)-2
ACC NR: AT6031911 SOURCE CODE: UR/0000/66/000/000/0092/0095

AUTHOR: Taranov, G. V. (Engineer) 42 B+1

ORG: Lvov Polytechnic Institute (L'vovskiy politekhnicheskiy institut)

TITLE: Serial binary-code decoder with a scaling unit

SOURCE: Lvov. Politekhnicheskiy institut. Kontrol'no-izmeritel'naya tekhnika (Control and measurement techniques), no. 2. Lvov, Izd-vo L'vov. univ., 1966, 92-95

TOPIC TAGS: telemetry equipment, code converter, binary decimal converter, CODE EVALUATION, BINARY CODE

ABSTRACT: A decoder unit for use in PCM telemetry systems is described which converts serial binary data representing measured quantities in relative units to decimal data in absolute units. The time division multiplex telemetry decoder (see Fig. 1) consists of a binary-to-decimal code converter and a scaling unit. An 8-bit binary number is converted to its decimal equivalent by the following principle. Each binary bit triggers a multiphase monostable circuit which issues a pulse train wherein the number of pulses equals the decimal equivalent of the binary bit. The scaling factor register unit sets the flip-flops T_1- T_5 into positions which determine one of ten scaling factors. The scaling factors determine the number of times the multiphase monostable output pulse train is repeated during its transmission to

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ACC NR: AT6031911

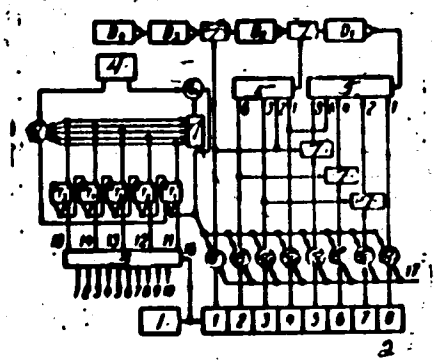

Fig. 1. Decoder block diagram

1 - Clock pulse generator; 2 - pulse distributor; 3 - scaling factor register; 4 - pulse generator; 5 - multiphase monostable circuits; 6 - inhibit gate; 7 - OR gates; 8 - AND gates; D_1-D_4 m decade counters.

the decade counters. The maximum number which may be registered by the decade counter is 7650. This arrangement reduces the number of decoder circuits and simplifies the operation of the decoder. Orig. art. has: 2 figures.

SUB CODE: 09/ SUBM DATE: 25Mar66/ ORIG REF: 002/

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PEYVE, Ya.V.; PETERBURGSKIY, A.V., doktor sel'khoz. nauk, prof.; GAR, K.A., kand. sel'khoz. nauk; GOLYSHIN, N.M., kand. biol. nauk; KOROTKIKH, G.I., kand. sel'khoz. nauk; CHESALIN, G.A., kand.sel'khoz.nauk; RAKITIN, Yu.V., doktor biol. nauk; ZEZYULINSKIY, V.M., kand. sel'khoz.nauk; DEVYATKIN, A.I., kand. sel'khoz. nauk; VENEDIKTOV, A.M., kand.sel'khoz. nauk; TARANOV, M.G., kand. biol. nauk; BORISOVA, L.G.; BEREZNIKOV, V.V., kand. tekhn.nauk; KONDRATENKO, R.V., st. nauchn.sotr.; BORISOV, F.B., st. nauchn.sotr.

[Chemistry in agriculture] Khimiia v sel'skom khoziaistve. Moskva, Kolos, 1964. 381 p. (MIRA 17:9)

1. Chlen-korrespondent AN SSSR (for Peyve). 2. Nachal'nik laboratorii Nauchno-issledovatel'skogo instituta plastmass (for Borisova). 3. Nauchno-issledovatel'skiy institut plastmass (for Kondratenko, Borisov).

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TARANOV, V. T.

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SO: Vechernaya Moskva January-December 1952

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2. USSR (600)

4. Serum

7. Nitrogenous substances in the blood serum of horses of different ages. Konevodstvo 23, No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

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1. TAHANOV, M.T.

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1. TARANOV, M. T.

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4. Nitrogen in the Body

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754910013-0

TARANOV, M. T.

Nitrogenous substances in the blood plasma of horses at different ages. M. T. Taranov. *Konevodstvo* 1953, No. 4, 28-30; *Referat. Zhur., Khim.* 1953, No. 6813.—Nitrogenous substances in the blood plasma were studied in 129 healthy horses at ages of 3 days to 19 years. The horses were pasture fed without supplemental feeding. It was found that as the animal grows, the contents of some nitrogenous fractions change, the most intense changes occur during the first year of the animal's life and are completed at the age of three. During this period the total N content in colts increases from 1027 to 1230 mg. % and in fillies from 976.4 to 1436.3 mg. %, the content of protein N changes accordingly from 997 to 1203.6 mg. % and from 945.6 to 1403.2 mg. %, and the concn. of protein from 6.23 to 7.66% in colts and from 5.91 to 8.77% in fillies. The residual N does not change appreciably and the concn. of amino N in the plasma filtrate decreases on an av. of from 9.6 to 7.23%.

M. Hoseh

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